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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/081,307	PLANKA, BOAZ	
	Examiner	Art Unit	
	Mohammad S. Adhami	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6,7,18 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6 and 18 recite "the access channel having a bandwidth exceeding the speech encoding rate." It is unclear how bandwidth can exceed a speech encoding rate.

Claims 7 and 19 are rejected because they depend from claims 6 and 18 respectively.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rabenko (US App. 2005/0031097) in view of Ota (US 6,661,846) and further in view of Fallon (US App. 2004/0042506).

Re claim 1:

Rabenko discloses "receiving at least an initial portion of speech packets at a transmission rate exceeding a speech encoding rate" (Para. [0555] "when the jitter buffer...is above a predetermined threshold level, the clock logic...increases the transmission rate of the data pump transmitter" where the transfer rate is greater than the speech encoding rate).

Rabenko does not explicitly disclose "decoding the speech packets at a rate exceeding the speech encoding rate."

Ota discloses "decoding the speech packets at a rate exceeding the speech encoding rate" (Col.6 lines 36 and 37 "If the decoder rate is slower than the encoder rate, then bitstream buffer overflow occurs" where the decoding rate is increased to prevent underflow).

Rabenko and Ota are analogous because they both pertain to transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Rabenko as discussed above as taught by Ota in order to prevent buffer overflow.

Rabenko does not explicitly disclose "processing the decoded speech packets to generate speech signals representative of the initial portion of speech packets, the speech signals having a shortened time period which at least in part compensates for a channel reallocation delay."

Fallon discloses "processing the decoded speech packets to generate speech signals representative of the initial portion of speech packets, the speech signals having a shortened time period which at least in part compensates for a channel reallocation delay" (Paragraph [0047] "decompression are accomplished in real-time or faster" where if the decompression is faster than real-time, then the speech signals have a shortened time period and Paragraph [0034] "the present invention is universally applicable to all forms of data communication" where speech is a form of data communication).

Rabenko and Fallon are analogous because they both pertain to data transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Rabenko as discussed above as taught by Fallon in order to reduce data transmission time.

Re claim 8:

Rabenko further discloses "the speech packets are received through an access medium that includes at least one of a wireless communication medium, a fiber optical medium, and a conductive wired medium" (Paragraph [0079] "wherein optical fiber provides communication" and Paragraph [0114] "the describer exemplary network gateway can include a voice processor...for processing and transporting voice over packet based networks such as...Public Digital Cellular Network such as TDMA (IS-13x)(, CDMA (IS-9x) or GSM for terrestrial wireless applications").

Re claim 9:

Rabenko further discloses "wherein when the access medium is a fiber optical medium, at least one of wavelength-division multiplexing, frequency-division multiplexing and time-division multiplexing is employed" (Paragraph [0080] "Frequency domain multiple-access (FDMA)/time division multiplexing (TDM) is used to facilitate communication").

Re claim 10:

Rabenko discloses "wherein when the access medium is a wireless communication medium, at least one of spread-spectrum multiplexing, frequency-division multiplexing and time-division multiplexing is employed" (Paragraph [0114] "the describer exemplary network gateway can include a voice processor...for processing and transporting voice over packet based networks such as...Public Digital Cellular Network such as TDMA (IS-13x)(, CDMA (IS-9x) or GSM for terrestrial wireless applications").

3. Claims 2,3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rabenko in view of Ota and Fallon as applied to claim 1 above, and further in view of Auld (US 5,398,072).

Re claim 2:

Rabenko discloses decreasing the transmitting rate when a threshold is met in a buffer (Para. [0555] "When the jitter buffer...is below a predetermined threshold, the clock logic...reduces the transmission rate").

Rabenko does not explicitly disclose "wherein processing includes processing the decoded speech packets at a processing rate which initially exceeds the speech encoding rate, and decreasing the processing rate gradually to approximately the speech encoding rate."

Auld discloses "wherein processing includes processing the decoded speech packets at a processing rate which initially exceeds the speech encoding rate, and decreasing the processing rate gradually to approximately the speech encoding rate" (Col.8 lines 46-50 "The microcontroller preferably adjusts the processing rates of the decoder...to avoid any underflow or overflow of...data input to the channel buffer" where when the processing rate initially exceeds the speech encoding rate, the buffer is being prevented from overflow and once the buffer is less likely to overflow because of a reduction in transmission rate, the processing rate is decreased to prevent underflow).

Rabenko and Auld are analogous because they both pertain to encoding and decoding media.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Rabenko as discussed above as taught by Auld in order to prevent buffer overflow of underflow.

Re claim 3:

As discussed above, Rabenko meets all the limitations of the parent claim.

Rabenko does not explicitly disclose "buffering the decoded speech packets in a buffer, and wherein processing includes retrieving the decoded

speech packets from the buffer at a varying rate which initially exceeds the speech encoding rate, the varying rate gradually being decreased to approximately the speech encoding rate."

Auld discloses "buffering the decoded speech packets in a buffer, and wherein processing includes retrieving the decoded speech packets from the buffer at a varying rate which initially exceeds the speech encoding rate, the varying rate gradually being decreased to approximately the speech encoding rate" (Col.8 lines 46-50 "The microcontroller preferably adjusts the processing rates of the decoder...to avoid any underflow or overflow of...data input to the channel buffer" where when the processing rate changes, the rate at which packets are retrieved from the buffer changes accordingly).

Rabenko and Auld are analogous because they both pertain to encoding and decoding media.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Rabenko as discussed above as taught by Auld in order to prevent buffer overflow of underflow.

Re claim 5:

As discussed above, Rabenko meets all the limitations of the parent claim.

Rabenko does not explicitly disclose "wherein the decoding is performed at approximately the transmission rate."

Auld discloses "wherein the decoding is performed at approximately the transmission rate" (Col.8 lines 46-50 "The microcontroller preferably adjusts the

processing rates of the decoder...to avoid any underflow or overflow of...data input to the channel buffer" where if the transmission rate is higher, more packets are coming in the buffer, so the decoding rate will go up to prevent overflow and is the transmission rate is low, less packets are coming in the buffer, so the decoding rate will be reduced to prevent underflow, so the decoding is performed at approximately the transmission rate).

Rabenko and Auld are analogous because they both pertain to encoding and decoding media.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Rabenko as discussed above as taught by Auld in order to prevent buffer overflow of underflow.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rabenko in view of Ota and Fallon as applied to claim 1 above, and further in view of Jacobs (US 6,594,628).

Re claim 4:

As discussed above, Jacobs meets all the limitations of the parent claims.

Rabenko does not explicitly disclose "wherein processing the decoded speech packets with a dynamic time portion of speech packets with a dynamic time warping process to generate speech signals representative of the initial portion of speech packets, the speech signals spanning a shorter time duration than the initial portion of speech packets and having substantially preserved pitch attributes of the initial portions of speech packets."

Jacobs discloses "wherein processing the decoded speech packets with a dynamic time portion of speech packets with a dynamic time warping process to generate speech signals representative of the initial portion of speech packets, the speech signals spanning a shorter time duration than the initial portion of speech packets and having substantially preserved pitch attributes of the initial portions of speech packets" (Col.4 lines 18-21 "the acoustic pattern matching in the word decoder can be based on...dynamic time warping (DTW)" where DTW preserves pitch attributes).

Rabenko and Jacobs are analogous because they both pertain to voice transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Rabenko as discussed above as taught by Jacobs in order to transmit compressed voice and still maintain quality.

5. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rabenko in view of Ota and Fallon as applied to claim 1 above, and further in view of Hippelainen (US 6,229,802).

Re claim 6:

As discussed above, Rabenko meets all the limitations of the parent claim.

Rabenko does not explicitly disclose "wherein the initial portion of speech packets is buffered for the channel reallocation delay until a channel through an access medium is granted, and wherein the initial portion of speech packets is

sent in response to the channel being granted, the channel having a channel bandwidth exceeding the speech encoding rate."

Hippelainen discloses "wherein the initial portion of speech packets is buffered for the channel reallocation delay until a channel through an access medium is granted, and wherein the initial portion of speech packets is sent in response to the channel being granted, the channel having a channel bandwidth exceeding the speech encoding rate" (Col.2 lines 34-39 "allocating channels for the data transmission" and "a buffer for buffering the packets to be sent").

Rabenko and Hippelainen are analogous because they both pertain to data transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Rabenko as discussed above as taught by Hippelainen in order to not lose data if a channel is not allocated for the data transmission.

Re claim 7:

As discussed above, Rabenko meets all the limitations of the parent claims.

Rabenko does not explicitly disclose "wherein the channel bandwidth is approximately proportional to an inverse of the channel reallocation delay."

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Rabenko where the channel bandwidth is approximately proportionally to an inverse of the channel reallocation delay because the channel bandwidth is inherently approximately proportional to an inverse of the

channel reallocation delay. The channel reallocation delay increases when there is no channel to allocate, which is caused when bandwidth is reduced. So a reduced bandwidth leads to an increased channel reallocation delay.

6. Claims 11,20,23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fallon in view of Ota.

Re claims 11 and 23:

Fallon discloses "a voice decoder to decode speech packets, at least an initial portion of the speech packets being delayed by a channel reallocation delay" (Para. [0115] "the decoder module...may include multiple decoders" where the data being decoded can be voice and the packets may have been delayed by a channel reallocation delay).

Fallon further discloses "a buffer to store the decoded speech packets" (Para. [0115] "An output data buffer or cache...may be included for buffering the decoded data block output from the decoder").

Fallon further discloses "a processing element to process the decoded speech packets...and to generate speech signals having a shortened time period which compensates at least in part for the channel reallocation delay" (Paragraph [0047] "decompression are accomplished in real-time or faster" where id the decompression is faster than real-time, then the speech signals have a shortened time period and Paragraph [0034] "the present invention is universally applicable to all forms of data communication" where speech is a form of data communication).

Fallon does not explicitly disclose decoding "speech packets at a rate exceeding a speech encoding rate."

Ota discloses decoding "speech packets at a rate exceeding a speech encoding rate" (Col.6 lines 36 and 37 "if the decoder rate is slower than the encoder rate, then bitstream buffer overflow occurs" where the decoding rate has to exceed the encoding rate to prevent buffer overflow and buffer overflow would occur because the transmission rate is increased).

Fallon and Ota are analogous because they both pertain to transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallon as discussed above as taught by Ota in order to prevent buffer overflow.

Re claim 20:

Fallon discloses "wherein the speech packets are received through an access medium that includes at least one of a wireless communication medium, a fiber optic medium, and a conductive wired medium" (Figure 1).

Re claim 24:

Fallon discloses "a voice encode to encode outbound speech packets" (Figure 5 reference 125).

Fallon further discloses "an output buffer to store outbound speech packets until a channel is reallocated for the transmission of the outbound speech packets" (Figure 5 reference 130).

7. Claims 12,14,15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fallon in view of Ota as applied to claim 11 above, and further in view of Rabenko and Auld.

Re claim 12:

As discussed above, Fallon meets all the limitations of the parent claim.

Fallon does not explicitly disclose "wherein the communication device receives the initial portion of the speech packets at a rate exceeding the speech encoding rate."

Rabenko discloses "wherein the communication device receives the initial portion of the speech packets at a rate exceeding the speech encoding rate" (Para. [0555] "when the jitter buffer...is above a predetermined threshold level, the clock logic...increases the transmission rate of the data pump transmitter" where the transfer rate is greater than the speech encoding rate).

Fallon and Rabenko are analogous because they both pertain to data transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallon as discussed above as taught by Rabenko in order to prevent buffer overflow.

Fallon does not explicitly disclose "the voice decoder decodes the initial portion of the speech packets at a rate exceeding the speech encoding rate."

Auld discloses "wherein processing includes processing the decoded speech packets at a processing rate which initially exceeds the speech encoding

rate, and decreasing the processing rate gradually to approximately the speech encoding rate" (Col.8 lines 46-50 "The microcontroller preferably adjusts the processing rates of the decoder...to avoid any underflow or overflow of...data input to the channel buffer" where when the decoder rate initially exceeds the speech encoding rate, the buffer is being prevented from overflow).

Fallon and Auld are analogous because they both pertain to data transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallon as discussed above as taught by Auld in order to prevent buffer overflow of underflow.

Re claim 14:

As discussed above, Fallon meets all the limitations of the parent claim.

Fallon does not explicitly disclose "wherein the processing element processes the decoded speech packets at a processing rate which initially exceeds the speech encoding rate and which is gradually decreased to approximately the speech encoding rate."

Auld discloses "wherein the processing element processes the decoded speech packets at a processing rate which initially exceeds the speech encoding rate and which is gradually decreased to approximately the speech encoding rate" (Col.8 lines 46-50 "The microcontroller preferably adjusts the processing rates of the decoder...to avoid any underflow or overflow of...data input to the channel buffer" where when the processing rate initially exceeds the speech

encoding rate, the buffer is being prevented from overflow and once the buffer is less likely to overflow because of a reduction in transmission rate, the processing rate is decreased to prevent underflow).

Fallon and Auld are analogous because they both pertain to data transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallon as discussed above as taught by Auld in order to prevent buffer overflow of underflow.

Re claim 15:

As discussed above, Fallon meets all the limitations of the parent claim.

Fallon does not explicitly disclose "wherein the processing element retrieves the decoded speech packets from the buffer at a rate which initially exceeds the speech encoding rate and which is gradually decreased to approximately the speech encoding rate."

Auld discloses "wherein the processing element retrieves the decoded speech packets from the buffer at a rate which initially exceeds the speech encoding rate and which is gradually decreased to approximately the speech encoding rate" (Col.8 lines 46-50 "The microcontroller preferably adjusts the processing rates of the decoder...to avoid any underflow or overflow of...data input to the channel buffer" where when the processing rate changes, the rate at which packets are retrieved from the buffer changes accordingly).

Fallon and Auld are analogous because they both pertain to data transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallon as discussed above as taught by Auld in order to prevent buffer overflow of underflow.

Re claim 17:

As discussed above, Fallon meets all the limitations of the parent claim.

Fallon further discloses "wherein the communication device receives the initial portion of the speech packets at a transmission rate" (Figure 1 where when data is received, it is received at a transmission rate).

Fallon does not explicitly disclose "the voice decoder performs the decoding at approximately the transmission rate."

Auld discloses "the voice decoder performs the decoding at approximately the transmission rate" (Col.8 lines 46-50 "The microcontroller preferably adjusts the processing rates of the decoder...to avoid any underflow or overflow of...data input to the channel buffer" where if the transmission rate is higher, the buffer more information placed into it, so the decoding rate needs to increase proportionally to prevent overflow and when the transmission rate is slower, the decoding rate is reduced to prevent underflow).

Fallon and Auld are analogous because they both pertain to data transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallon as discussed above as taught by Auld in order to prevent buffer overflow of underflow.

8. Claims 13,18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fallon in view of Ota as applied to claim 11 above, and further in view of Hippelainen.

Re claim 13:

As discussed above, Fallon meets all the limitations of the parent claim.

Fallon does not explicitly disclose "wherein the initial portion of the speech pckets are buffered for a time approximately the channel reallocation delay prior to transmission through an access medium, wherein the channel reallocation delay includes time to grant a channel through the access medium."

Hippelainen discloses "wherein the initial portion of the speech packets are buffered for a time approximately the channel reallocation delay prior to transmission through an access medium, wherein the channel reallocation delay includes time to grant a channel through the access medium" (Col.2 lines 34-39 "allocating channels for the data transmission" and "a buffer for buffering the packets to be sent").

Fallon and Hippelainen are analogous because they both pertain to data transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallon as discussed above as taught by Hippelainen in order to not lose data if a channel is not allocated for the data transmission.

Re claim 18:

As discussed above, Fallon meets all the limitations of the parent claim.

Fallon further discloses "wherein the speech packets are received through a channel granted through an access medium, the access channel having a bandwidth exceeding the speech encoding rate" (Figure 1 where the packets are received via a channel and the access medium is wireless communications).

Re claim 19:

As discussed above, Fallon meets all the limitations of the parent claims.

Fallon does not explicitly disclose "wherein the bandwidth of the access channel is approximately proportional to an inverse of the channel reallocation delay."

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallon where the channel bandwidth is approximately proportionally to an inverse of the channel reallocation delay because the channel bandwidth is inherently approximately proportional to an inverse of the channel reallocation delay. The channel reallocation delay increases when there is no channel to allocate, which is caused when bandwidth is reduced. So a reduced bandwidth leads to an increased channel reallocation delay.

9. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fallon in view of Ota as applied to claim 11 above, and further in view of Jacobs.

Re claim 16:

As discussed above, Fallon meets all the limitations of the parent claim.

Fallon does not explicitly disclose "wherein processing element processes the decoded speech packets with a dynamic time portion of speech packets with a dynamic time warping process to generate speech signals representative of the initial portion of speech packets, the speech signals spanning a shorter time duration than the initial portion of speech packets and having substantially preserved pitch attributes of the initial portions of speech packets."

Jacobs discloses "wherein processing element processes the decoded speech packets with a dynamic time portion of speech packets with a dynamic time warping process to generate speech signals representative of the initial portion of speech packets, the speech signals spanning a shorter time duration than the initial portion of speech packets and having substantially preserved pitch attributes of the initial portions of speech packets" (Col.4 lines 18-21 "the acoustic pattern matching in the word decoder can be based on...dynamic time warping (DTW)" where DTW preserves pitch attributes).

Fallon and Jacobs are analogous because they both pertain to voice transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallon as discussed above as taught by Jacobs in order to transmit compressed voice and still maintain quality.

10. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fallon in view of Ota as applied to claim 20 above, and further in view of Rabenko.

Re claim 21:

As discussed above, Fallon meets all the limitations of the parent claims.

Fallon does not explicitly disclose "wherein when the access medium is a fiber optical medium, the communication device includes a demultiplexer to demultiplex received speech packets that are at least one of wavelength multiplexed, frequency division multiplexed and time division multiplexed."

Rabenko discloses wherein when the access medium is a fiber optical medium" (Paragraph [0079] "wherein optical fiber provides communication"), "the communication device includes a demultiplexer to demultiplex received speech packets that are at least one of wavelength multiplexed, frequency division multiplexed and time division multiplexed" (Paragraph [0080] "Frequency domain multiple-access (FDMA)/time division multiplexing (TDM) is used to facilitate communication" where if a signal is multiplexed, then it requires a demultiplexer on the other end).

Fallon and Rabenko are analogous because they both pertain to data transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallon as discussed above as taught by Rabenko in order to efficiently transmit data.

Re claim 22:

As discussed above, Fallon meets all the limitations of the parent claims.

Fallon does not explicitly disclose "wherein when the access medium is a wireless communication medium, the communication device is a wireless communication device having a receiver to receive the speech packets that are at least one of spread spectrum multiplexed, frequency division multiplexed, and time division multiplexed."

Rabenko discloses "wherein when the access medium is a wireless communication medium, the communication device is a wireless communication device having a receiver to receive the speech packets that are at least one of spread spectrum multiplexed, frequency division multiplexed, and time division multiplexed" (Paragraph [0114] "the describer exemplary network gateway can include a voice processor...for processing and transporting voice over packet based networks such as...Public Digital Cellular Network such as TDMA (IS-13x)(, CDMA (IS-9x) or GSM for terrestrial wireless applications").

Fallon and Rabenko are analogous because they both pertain to data transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallon as discussed above as taught by Rabenko in order to efficiently transmit data.

11. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fallon in view of Ota as applied to claim 24 above, and further in view of Rinne (US App. 2005/0207388).

Re claim 25:

As discussed above, Fallon meets all the limitations of the parent claims.

Fallon does not explicitly disclose "a media access controller to receive inbound speech packets from an access medium, to transfer outbound speech packets to the access medium and to request allocation of an access channel for transmission of the outbound speech packets through the access medium."

Rinne discloses "a media access controller to receive inbound speech packets from an access medium, to transfer outbound speech packets to the access medium and to request allocation of an access channel for transmission of the outbound speech packets through the access medium" (Para. [0021] "the logical signaling channel to be used is selected by a layer managing the radio resources of the transmission protocol such as the Medium Access Control (MAC) layer").

Fallon and Rinne are analogous because they both pertain to data transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallon as discussed above as taught by Rinne in order to transmit data according to quality of service requirements.

12. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fallon in view of Ota and Rinne as applied to claim 25 above, and further in view of Rabenko and Auld.

Re claim 26:

As discussed above, Fallon meets all the limitations of the parent claims.

Fallon further discloses "wherein the voice encoder encodes the outbound speech packets at the speech encoding rate" (Figure 5 reference 125 where the voice is encoded as it is received from the data stream).

Fallon does not explicitly disclose "wherein the media access controller sends the outbound speech packets through the access medium at a rate exceeding the speech encoding rate."

Rabenko discloses "wherein the media access controller sends the outbound speech packets through the access medium at a rate exceeding the speech encoding rate" (Para. [0555] "when the jitter buffer...is above a predetermined threshold level, the clock logic...increases the transmission rate of the data pump transmitter" where the transfer rate is greater than the speech encoding rate).

Fallon and Rabenko are analogous because they both pertain to data transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallon as discussed above as taught by Rabenko in order to prevent buffer overflow.

Fallon does not explicitly disclose "wherein the processing element processes the decoded inbound speech packets at a rate which initially exceeds the speech encoding rate and which is gradually decreased to approximately the speech encoding rate."

Auld discloses "wherein the processing element processes the decoded inbound speech packets at a rate which initially exceeds the speech encoding rate and which is gradually decreased to approximately the speech encoding rate" (Col.8 lines 46-50 "The microcontroller preferably adjusts the processing rates of the decoder...to avoid any underflow or overflow of...data input to the channel buffer" where when the processing rate initially exceeds the speech encoding rate, the buffer is being prevented from overflow and once the buffer is less likely to overflow because of a reduction in transmission rate, the processing rate is decreased to prevent underflow).

Fallon and Auld are analogous because they both pertain to data transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallon as discussed above as taught by Auld in order to prevent buffer overflow of underflow.

13. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fallon in view of Ota, Rinne, Rabenko, and Auld as applied to claim 26 above, and further in view of Jacobs.

Re claim 27:

As discussed above, Fallon meets all the limitations of the parent claims.

Fallon does not explicitly disclose "wherein processing element processes the decoded inbound speech packets with a dynamic time warping process to generate speech signals representative of the initial portion of the inbound speech packets, the speech signals spanning a shorter time duration than the initial portion of the inbound speech packets and having substantially preserved pitch attributes of the initial portions of speech packets"

Jacobs discloses "wherein processing element processes the decoded inbound speech packets with a dynamic time warping process to generate speech signals representative of the initial portion of the inbound speech packets, the speech signals spanning a shorter time duration than the initial portion of the inbound speech packets and having substantially preserved pitch attributes of the initial portions of speech packets" (Col.4 lines 18-21 "the acoustic pattern matching in the word decoder can be based on...dynamic time warping (DTW)" where DTW preserves pitch attributes).

Fallon and Jacobs are analogous because they both pertain to voice transmission.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallon as discussed above as taught by Jacobs in order to transmit compressed voice and still maintain quality.

Re claim 28:

Fallon discloses "wherein the voice decoder, buffer, processing element, voice encoder, output buffer and media access controller are part of a two-way wireless communication device" (Figure 1).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Coverdale (US 6,373,842) discloses transmitting initially at a higher rate. O'Mahony (US 5,878,120) discloses a channel allocation delay when switching from data to audio. Balakrishnan (US 5,566,208) discloses varying the channel rate. Gable (US App. 2005/0060153) discloses DTW with pitch parameter. Jarvinen (US 5,862,178) discloses compressing speech signals and changing the transmission rate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad S. Adhami whose telephone number is (571)272-8615. The examiner can normally be reached on Monday-Friday 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571)272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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